Application No.: 10/601171 Docket No.: SYNI-003CN

AMENDMENTS TO THE CLAIMS

1-60. (Canceled)

- 61. (New) A monoclonal antibody, or fragment thereof, having binding specificity to LTA of Gram positive bacteria, wherein the antibody enhances opsonization of Gram positive bacteria by 75% or more over background.
- 62. (New) The monoclonal antibody of claim 61, wherein the opsonization is in the presence of complement, cells, or combination thereof.
- 63. (New) The monoclonal antibody of claim 62, wherein the complement, cells, or combination thereof is human.
- 64. (New) The monoclonal antibody of claim 62, wherein the cells are phagocytic cells.
- 65. (New) The monoclonal antibody of claim 62, wherein the cells are macrophages, monocytes, neutrophils, or combinations thereof.
- 66. (New) The monoclonal antibody of claim 62, wherein the opsonization comprises opsonophagocytic bactericidal activity.
- 67. (New) The monoclonal antibody of claim 61, wherein the antibody is capable of binding to LTA of Gram positive bacteria fixed to a solid support.
- 68. (New) The monoclonal antibody of claim 67, wherein the solid support is a plate well, bead, or micro-bead.
- 69. (New) A monoclonal antibody, or fragment thereof, having binding specificity to LTA of Gram positive bacteria and confers a statistically significant enhancement of survival or reduced bacteremia in a lethal animal model.
- 70. (New) The monoclonal antibody of claim 69, wherein the statically significant enhancement of survival in a lethal animal model is 25% or greater.
- 71. (New) The monoclonal antibody of claim 69, wherein the statically significant enhancement of survival in a lethal animal model is 50% or greater.
- 72. (New) The monoclonal antibody of claim 69, wherein the statically significant enhancement of survival in a lethal animal model is 70% or greater.
- 73. (New) The monoclonal antibody of claim 69, wherein the statically significant enhancement of survival in a lethal animal model is 76% or greater.
- 74. (New) The monoclonal antibody of claim 69, wherein the statically significant enhancement of survival in a lethal animal model is 90% or greater.

Application No.: 10/601171 Docket No.: SYNI-003CN

75. (New) The monoclonal antibody of claim 69, wherein the statically significant enhancement of survival in a lethal animal model is between 67% and 83%.

- 76. (New) The monoclonal antibody of claim 69, wherein the statically significant enhancement of survival in a lethal animal model is between 83% and 100%.
- 77. (New) A monoclonal antibody, or fragment thereof, having binding specificity to LTA, wherein the antibody has at least 70% amino acid identity with the variable region of a heavy chain, light chain, or both a heavy chain and light chain of Mab 110.
- 78. (New) The monoclonal antibody of claim 77, wherein the amino acid identity is at least 80%, 90%, or 95%.
- 79. (New) The monoclonal antibody of claim 61, 69, or 77, wherein the antibody comprises a portion of a human antibody sequence.
- 80. (New) The monoclonal antibody of claim 79, wherein the portion of human antibody sequence comprises an Fc region.
- 81. (New) The monoclonal antibody of claim 61, 69, or 77, wherein the antibody specifically binds LTA exposed on the surface of the cell wall of Gram positive bacteria.
- 82. (New) The monoclonal antibody of claim 61, 69, or 77, wherein the antibody specifically binds to LTA of Gram positive bacteria that are coagulase positive, coagulase negative, or both coagulase positive and coagulase negative Gram positive bacteria.
- 83. (New) The monoclonal antibody of claim 61, 69, or 77, wherein the antibody specifically binds to LTA of Gram positive bacteria that are *Staphylococcus epidermidis*.
- 84. (New) The monoclonal antibody of claim 61, 69, or 77, wherein the antibody specifically binds to LTA of Gram positive bacteria that are *Staphylococcus epidermidis*, *Staphylococcus aureus*, or both *Staphylococcus epidermidis* and *Staphylococcus aureus*.
- 85. (New) The monoclonal antibody of claim 61, 69, or 77, wherein the antibody specifically binds to LTA of Gram positive bacteria that are multiple serotypes of *Staphylococcus* epidermidis, *Staphylococcus* aureus, or both *Staphylococcus* epidermidis and *Staphylococcus* aureus.
- 86. (New) The monoclonal antibody of claim 85, wherein the multiple serotypes of *Staphylococcus aureus* are serotype 5, serotype 8, or both serotype 5 and serotype 8.
- 87. (New) The monoclonal antibody of claim 61, 69, or 77, wherein the antibody specifically binds to LTA of Gram positive bacteria that are *Staphylococcus epidermidis* and one or more Gram positive bacteria selected from the group consisting of *Staphylococcus aureus*, *Streptococcus mutans*, *Streptococcus faecalis*, and *Streptococcus pyogenes*.

Application No.: 10/601171 Docket No.: SYNI-003CN

88. (New) A monoclonal antibody, or fragment thereof, having binding specificity to LTA of Gram positive bacteria, wherein the antibody specifically binds to LTA of the Gram positive bacteria *Staphylococcus epidermidis* and *Staphylococcus aureus*.

- 89. (New) The monoclonal antibody of claim 61, 69, 77, or 88, wherein the antibody specifically binds to LTA of Gram positive bacteria at a binding affinity of at least about 10E-7 M or more.
- 90. (New) The monoclonal antibody of claim 61, 69, 77, or 88, wherein the antibody specifically binds to LTA of Gram positive bacteria at a binding affinity of at least about 10E-8 M or more.
- 91. (New) The monoclonal antibody of claim 61, 69, 77, or 88, wherein the antibody specifically binds to LTA of Gram positive bacteria and reduces LTA-mediated inflammation, LTA-mediated cytokine production, or combination thereof.
- 92. (New) The monoclonal antibody of claim 61, 69, 77, or 88, wherein the antibody is IgG, IgA, or IgM.
- 93. (New) The monoclonal antibody fragment of claim 61, 69, 77, or 88, wherein the fragment is an Fab, Fab', F(ab')2, or sFv.
- 94. (New) A polyclonal antibody composition comprising at least one of the antibodies of claim 61, 69, 77, or 88.
- 95. (New) A pharmaceutical composition comprising an effective amount of an antibody of claim 61, 69, 77, or 88, wherein the antibody binds LTA and is in a pharmaceutical carrier suitable for use in humans.
- 96. (New) A polynucleotide encoding an antibody, or fragment thereof, of claim 61, 69, 77, or 88.
- 97. (New) The polynucleotide of claim 96, wherein the polynucleotide encoding the variable region of the antibody, or fragment thereof, has at least 70% identity to the polynucleotide set forth in FIG. 12.
- 98. (New) A vector comprising the polynucleotide of claim 96.
- 99. (New) A cell comprising the polynucleotide of claim 96 or the vector of claim 98.
- 100. (New) An antibody, or fragment thereof, produced by the cell of claim 99.